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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/697,584	10/29/2003	Theodore M. Khalili	203782000400	7687
25226	7590	10/26/2005	EXAMINER	
MORRISON & FOERSTER LLP 755 PAGE MILL RD PALO ALTO, CA 94304-1018			JOHNSON III, HENRY M	
			ART UNIT	PAPER NUMBER
			3739	

DATE MAILED: 10/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

SP

Office Action Summary	Application No. 10/697,584	Applicant(s) KHALILI, THEODORE M.	
	Examiner Henry M. Johnson, III	Art Unit 3739	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 August 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-20 and 22-41 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-20 and 22-41 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Response to Arguments

Applicant's arguments filed 31 August 2005 have been fully considered but they are not persuasive. The individual arms of Takayama et al. are interpreted as elongated bodies and one is disclosed as having a camera at its distal end. The face of the optical fiber in the main body may also be reasonably interpreted as an image detector. Takayama et al. should not be characterized only as an industrial apparatus when it is clearly disclosed for surgical procedures such as a coronary artery surgical operation.

Wilk in fact does teach the use of jointed arms as clearly shown in Figure 12. Takayama et al. do teach the introduction of surgical devices by sliding into a channel as shown by Figures 13 and 14. These cross teachings provide clear motivation to combine like features from a related invention.

The indicated allowability of claim 27 is withdrawn in view of re-evaluation and interpretation of the claim language. Rejections based on the newly cited reference(s) follow.

A recitation with respect to the manner in which an apparatus is intended to be employed does not impose any structural limitation upon the claimed apparatus which differentiates it from a prior art reference disclosing the structural limitations of the claim. In re Pearson, 494 F.2d 1399, 181 USPQ 641 (CCPA 1974); In re Yanush, 477 F.2d 958, 177 USPQ 705 (CCPA 1973); In re Finsterwalder, 436 F.2d 1028, 168 USPQ 530 (CCPA 1971); In re Casey, 370 F.2d 576, 152 USPQ 235 (CCPA 1967); In re Otto, 312 F.2d 937, 136 USPQ 458 (CCPA 1963); Ex parte Masham, 2 USPQ2d 1647 (BdPatApp & Inter 1987).

The examiner's motivation to combine is based on the teachings of the references in combination with the general state of the art at the time of the invention. "It should be too well settled now to require citation or discussion that the test for combining references is not what the individual references themselves suggest but rather what the combination of disclosures taken as a whole would suggest to one of ordinary skill in the art. Any judgment on obviousness

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is in a sense necessarily a reconstruction based upon hindsight reasoning, but so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made and does not include knowledge gleaned only from applicant's disclosure, such a reconstruction is proper." In re McLaughlin, 443 F.2d 1392, 1395, 170 USPQ 209, 212 (CCPA 1971).

The applicant inadvertently included two new claims numbered 33. The claims have been renumbered accordingly and now claims 2-20 and 22-41 are pending. New claim 37 was examined as depending on claim 36 (vice 35). The applicant is requested to confirm this dependency.

Claim Objections

Claim 3 is objected to because of the following informalities: the term "each at least one of said" in line 2 is not clear. Appropriate correction is required.

Claim 15 contains the term "fist arm" in line 2. Appropriate correction is required.

Applicant is advised that should claim 2 be found allowable, claim 10 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 39 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 39 is indefinite as the meaning of operating to carry a surgical supply is unclear.

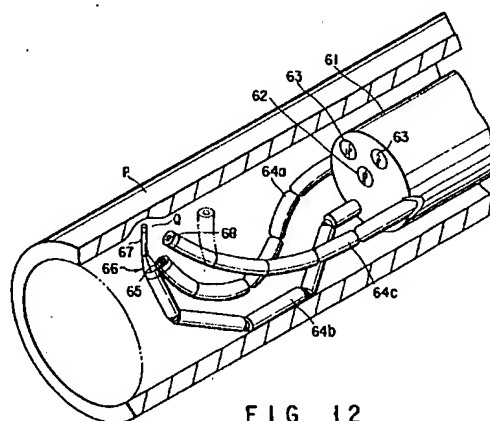
Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 2, 3, 5-10, 30, 31 and 41 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 5,624,380 to Takayama et al. Takayama et al. teach a manipulator with multiple degrees of freedom (abstract) that may be used in surgical applications (Col. 9, line 23). Multiple, robotic arms (Fig. 12) are extendable from an elongated body (Fig. 12, # 61), the arms comprising multiple joints for connecting multiple arm sections, the arms are disclosed as having multi-degrees-of-freedom (Col. 8, lines 50-52). Camera observation is provided in the body (Fig. 12, # 63) and on one of the arms (Fig. 12, # 65). The jointed arms may be extended from the end of an introducer (Fig. 13) and may include a clamp member (Fig. 13, # 73) that is interpreted as a surgical tool. The arms are capable of expanding radially. Tools are disclosed on each arm (Col. 8, lines 57-67) inherently indicating a capability the tools could be surgical tools.



Regarding claim 7, where the arms are deployed is intended use.

Claims 11-13, 22-26 and 28-29 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 5,368,015 to Wilk. Wilk discloses an automated surgical endoscopic instrument

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with a camera and two movable arms (Fig. 5, #'s 196 & 198) in separate chambers. Wilk discloses that small video cameras may be mounted at the end of the endoscope (Col. 1, lines 30-33). Translatory drives (Fig. 5, #'s 216 & 218) provide axial movement (sliding) of the arms from the body (Fig. 5, # 192). Wilk teaches multiple surgical tools attachable to the arms (Fig. 7). Wilk discloses an embodiment with an articulated arm within a chamber (Fig. 12C), the arm having multiple sections and two joints (Fig. 12C, #'s 374 & 386). The arm is rotatable by a one or two-axis rotary drive (Col. 5, lines 38-40). The method disclosed includes inserting the device into a body and activating the arms with tools (Col. 5, lines 15-20). Video images are provided (Col. 6, lines 30-35) and the surgeon operates the device (Col. 6, lines 1-6). Laparoscopic procedures inherently involve an incision. Wilk teaches the device for removal of a gallbladder (Col. 5, lines 13-15) inherently teaching a small diameter and dissecting tissue. For a biopsy or gallbladder procedure, the arms must operate in a coordinated manner and the operator would inherently use the disclosed video in coordinating the arm movements.

Regarding claim 26, no additional method step is disclosed.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,624,380 to Takayama et al. as applied to claim 2 above, and further in view of U.S. Patent 5,368,015 to Wilk. Takayama et al. are discussed above, but do not disclose the robotic arms deployable from within a lumen or chamber. Wilk discloses an automated surgical endoscopic instrument with a camera and two movable arms (Fig. 5, #'s 196 & 198).

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Translatory drives (Fig. 5, #'s 216 & 218) provide axial movement of the arms from lumens of an endoscope (Fig. 5, # 192). Wilk further discloses the orientation of the forceps jaws is controlled by computer via a one or two-axis rotary drive, thus providing axial rotation. It would have been obvious to one having ordinary skill in the art at the time the invention was made to deploy the axially rotatable arms from channels in the device body as taught by Wilk in the invention of Takayama et al. as both inventions are disclosed for use during minimally invasive surgical procedures known to use introducers and/or endoscopes for the introduction of working elements.

Claims 14-20 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,368,015 to Wilk as applied to claim 11 above and further in view of U.S. Patent 5,624,380 to Takayama et al. Both are discussed above. Takayama et al. further teach three robotic arms (Fig. 12). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the multiple jointed arms as taught by Takayama et al. in the invention of Wilk to provide additional capability for working tools at the working site.

Regarding claim 18, endoscopes with diameters as small as 2 millimeters are known. This is considered a mere change in size. A change in the size of a prior art device is a design consideration within the skill of the art. In re Rose, 220 F.2d 459, 105 USPQ 237 (CCPA 1955).

Regarding claim 20, the arms of either Wilk or Takayama et al. are capable of reaching the treatment area from different directions.

Claims 27 and 36-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,368,015 to Wilk in view of U.S. Patent 5,624,380 to Takayama et al. Both are discussed above. Wilk anticipates the method steps of claim 27. The inclusion of arms with multiple sections is addressed above in the rejection of the apparatus. The method steps are not impacted by this structural limitation. The illumination step of claim 38 is anticipated by Wilk, the specific source having no impact on the method. However, Takayama et al. does teach the

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use of LEDs for illumination. It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the segmented arms and LEDs as taught by Takayama et al. in the methods of Wilk for a minimally invasive surgical procedure as any such arms with the necessary degree of articulation could be used and any source of illumination would suffice.

Regarding claim 40, any of the clamps (Fig. 7) of Wilk can be interpreted as a coagulator.

Claims 33 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,624,380 to Takayama et al. as applied to claim 6 above, and further in view of U.S. Patent 5,368,015 to Wilk. All are discussed above. It would have been obvious to one having ordinary skill in the art at the time the invention was made to deploy the axially rotatable arms from channels in the device body as taught by Wilk in the invention of Takayama et al. as both inventions are disclosed for use during minimally invasive surgical procedures known to use introducers and/or endoscopes for the introduction of working elements with maximum articulation capability.

Conclusion

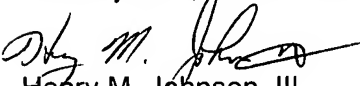
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patent 5,599,151 to Daum et al. teaches a surgical manipulator to follow the movement of a human hand including rotation of the appliance in response to rotation of a human arm.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Henry M. Johnson, III whose telephone number is (571) 272-4768. The examiner can normally be reached on Monday through Friday from 6:00 AM to 3:00 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Linda C. Dvorak can be reached on (571) 272-4764. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Henry M. Johnson, III
Patent Examiner
Art Unit 3739